2.12

Construction and Operation Activities (WAC 463-42-235)

WAC 463-42-235 PROPOSAL — CONSTRUCTION AND OPERATION ACTIVITIES.
The applicant shall: Provide the proposed construction schedule, identify the major milestones, and describe activity levels versus time in terms of craft and noncraft employment; and describe the proposed operational employment levels.
[Statutory Authority: RCW 80.50.040(1) and chapter 80.50 RCW.
81-21-006 (Order 81-5), §463-42-235, filed 10/8/81.]

2.12 CONSTRUCTION AND OPERATION ACTIVITIES (WAC 463-42-235)

2.12.1 POWER PLANT

2.12.1.1 Construction Schedule and Milestones

Construction and final design of the power plant will be accomplished over a 22-month period, which begins at Construction Financial Closing. Prior to Construction Financial Closing, equipment specifications, and fabrication of major plant equipment will be initiated. The estimated construction schedule in Figure 2.12-1 will remain the same for either winter startup or summer startup.

The date of initiation of construction will be dependent on the needs of the Certificate Holder's customers. Based on the anticipated permitting schedule, including the amendment to the Site Certification Agreement, construction could begin as early as October of 2002. Since the date of initiation of on-site construction activities is not known, the information regarding construction schedules presented below is based on duration of activities over the 19-month on-site construction period.

Figure 2.12-1 identifies the major schedule milestones for design and construction of the power plant and associated facilities. The majority of the site preparation work has been completed as part of Phase I. Following the engineering and design studies, construction activities will begin with the preparation of the site, which will include final grading and road construction. Site preparation is expected to take 3 months. Construction will generally occur 5 days per week (Monday through Friday), with a 10-hour work day (7 a.m. to 5 p.m.).

Site preparation will be followed by the installation of underground utilities and foundation work. As soon as possible after the completion of foundation work, the erection of the combustion and steam turbine generator trains and the heat recovery steam generator will begin. The cooling tower, pumps, transformers, mechanical and electrical and other equipment will be installed next.

2.12.1.2 Construction Workforce

It is anticipated that the construction of the Phase II project will overlap with the construction of Phase I by approximately 8 months. The construction staff used for Phase I would transition to Phase II as their crafts were no longer needed on Phase I. The estimated number of construction workers (craft and non-craft) for the Phase II project by month is shown in Table 2.12-1 and Figure 2.12-2.

TABLE 2.12-1
POWER PLANT CONSTRUCTION WORKFORCE LOADING

Month	Craft	Non-Craft (Project Management)	Total Staff
1	19	11	30
2	28	17	45
3	52	20	72
4	78	22	100
5	98	28	126
6	130	30	210
7	162	36	198
8	196	37	233
9	225	42	267
10	288	42	330
11	376	42	418
12	438	43	481
13	480	50	530
14	487	52	539
15	505	52	557
16	487	48	535
17	433	48	481
18	306	45	351
19	203	42	245
20	105	34	139
21	16	27	43
22	0	27	27

The peak workforce during the 22-month construction period will range from over 400 to over 500 construction personnel from about Month 12 through Month 17 of construction (see Figure 2.12-2). During the construction phase there will be craft workers (welders, electricians, etc.) and non-craft workers (engineers, inspectors, etc.). As stated above, most if not all of these workers would come from workers hired for the construction of Phase I.

The types of crafts that will be required for construction include the following: boilermakers, carpenters, cement finishers, electricians, equipment operators and oilers, fire sprinkler installers, laborers, millwrights, painters, pile drivers, pipefitters, plumbers, rodmen, structural steel workers, and, welders.

The estimated number of non-craft workers for the construction and start-up phase is based on the sum of project management staff needed by function plus the administrative staff (on-site construction inspectors and project engineers) associated with the anticipated volume of work.

2.12.1.3 Operation

Operation of the project would involve approximately 22 employees working either two 12-hour shifts or three 8-hour shifts, with a maximum of 26 employees working on site at any time (see Table 2.12-2). The operational labor force would include the following positions: plant manager, operations supervisor/engineer, control operators, auxiliary operators, maintenance supervisor, mechanical and electrical technicians, and clerks. Efforts would be made to hire local individuals to staff the project as much as practicable. After the load needs of the Certificate Holder's customers are identified, the Certificate Holder will select the most appropriate number of shifts to meet the power needs. The two possible shift schedules currently under consideration for each unit are shown in Table 2.12-2.

TABLE 2.12-2
POSSIBLE PLANT SHIFT SCHEDULES

Schedule	Shifts	Personnel and Hours
Option 1	Two 12-hour shifts	26 people working from 6:00 a.m. to 6:00 p.m.
		4 people working from 6:00 p.m. to 6:00 a.m.
Option 2	Three 8-hour shifts	26 people working from 8:00 a.m. to 4:00 p.m.
		4 people working from 4:00 p.m. to 12:00 a.m.
		4 people working from 12:00 a.m. to 8:00 a.m.

Major maintenance is expected to take place in Year 6 of operation. During this work, 50 additional people will be on site for 28 days during the day shift.

Initiation of commercial operation for the plant will be dependent on the needs of the Certificate Holder's customers. If construction is initiated in October of 2002 immediately after the Certificate Holder obtains all required permits, the earliest anticipated date for the initiation of commercial operation is approximately mid-2004.

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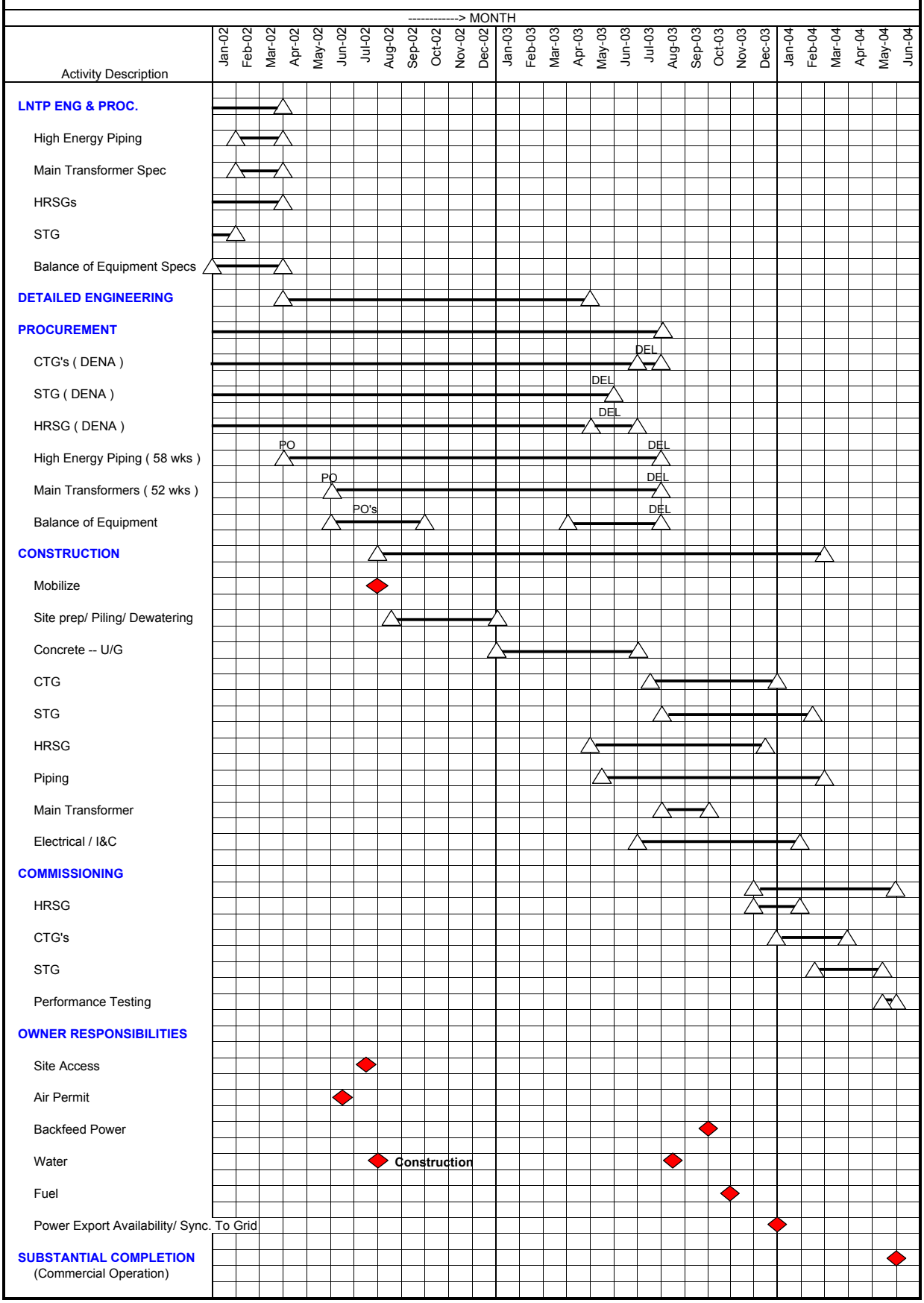
Figure 2.12-1 Construction Schedule



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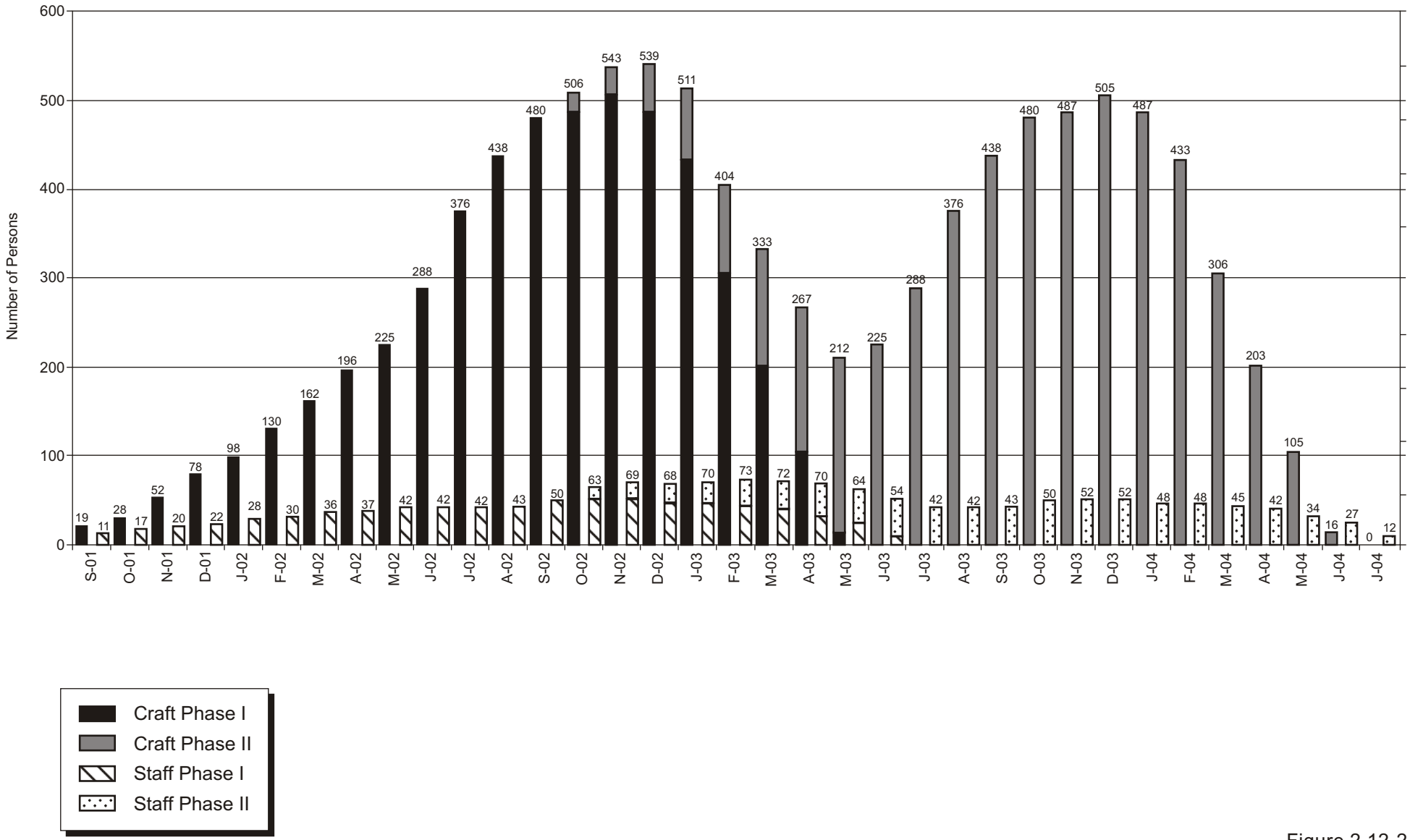

Figure 2.12-2

Projected Craft and Staff Requirements for Phase II (Shown Overlapped with Phase I)